CPU PCB 68332

1 General

In case of repair, replace the complete printed circuit board. Remove the lithium battery, the real-time clock, the EEPROM, and, if applicable, the jumpers from the faulty printed circuit board and install them on the new CPU 68332 PCB.

Electrostatic discharge may damage electrostatic sensitive devices. When handling electrostatic sensitive devices, use a static-dissipative mat and a static dissipative wrist strap.

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2 Power supply

X2 (power supply)			
Pin	Assignment	Pin	Assignment
1c	+12 V	8c	AGND
2c	+24 V	15c	DGND
3c	+15 V	16c	+5 V
4c	-15 V		

X11	
Pin	Assignment
1	+5 V
3	DGND

X13	
Pin	Assignment
1	+5 V ISO
3	GND ISO

VCC RAM	
Pin	Assignment
32	+5 V (minimum voltage for retention of data is 2 V)
16	DGND

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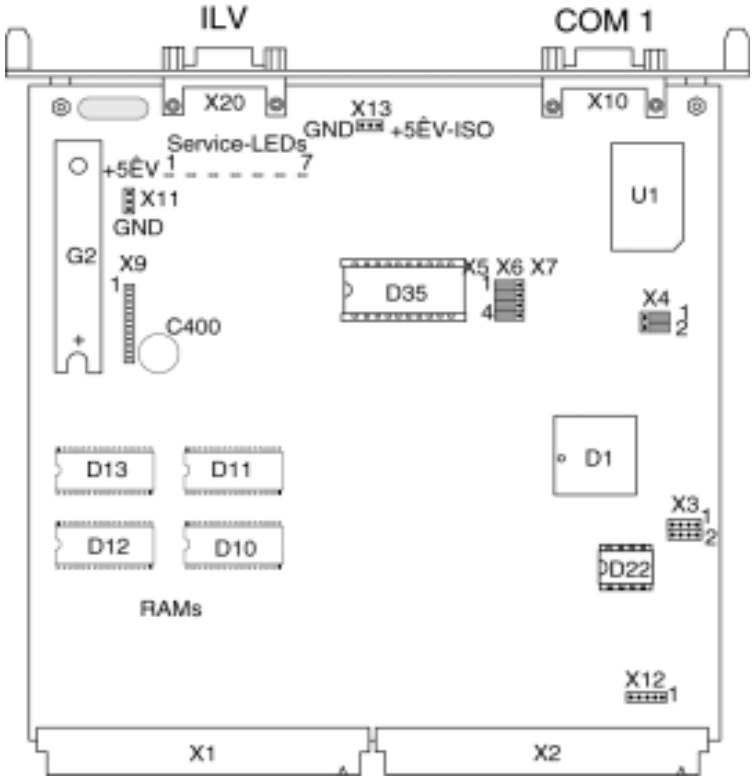

Fig. 1 CPU PCB 68332

G2	Lithium battery
U1	DC/DC converter
D35	Real-time clock
D1	Microprocessor
D22	EEPROM

3 Service LEDs

The service LEDs indicate a reset.

LED	Reset	Meaning
1	Overvoltage	+5 V is too high.
2	Undervoltage	+5 V is too low.
3	CPU reset	The microprocessor, which is located on the CPU 68332 PCB, resets its own peripherals.
4	Reset up	The reset signal from the Pneumatics Controller PCB resets the CPU 68332 PCB.
5	Reset down	The reset signal from the CPU 68332 PCB resets the microprocessor on the Pneumatics Controller PCB and the boards on the motherboard.
6	Display reset	The reset signal from the CPU 68332 PCB resets the microprocessor of the control unit.

LED	Reset	Meaning
7	Pneumatics disabled	This signal is set if the pneumatics is not functioning properly. It will remain set until the pneumatics functions properly again.

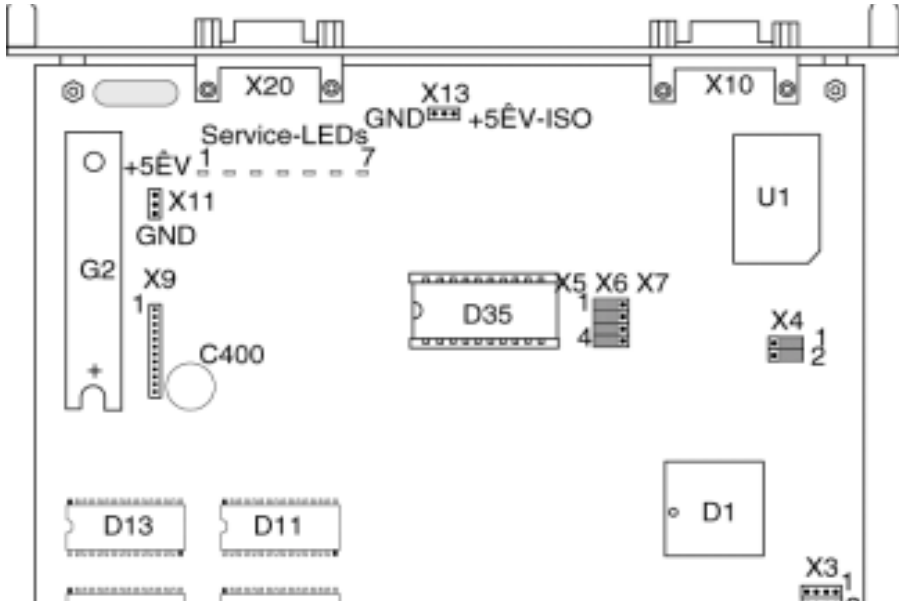

Fig. 2 Detail of the CPU 68332 PCB; service LEDs

4 Replacing the CPU 68332 PCB

1 Switch off the device.

2 Unplug the power plug of the device from the socket-outlet.

Electrostatic discharge may damage electrostatic sensitive devices. When handling electrostatic sensitive devices, use a static-dissipative mat and a static dissipative wrist strap.

3 Create ESD conditions.

4 Remove the faulty CPU 68332 PCB from the devcie and place it on the static-dissipative mat.

5 Remove the lithium battery (Fig. 3/G2) from the faulty CPU 68332 PCB and insert it into the battery holder of the new CPU 68332 PCB making sure the polarity is correct.

6 Remove the module D22 (EEPROM) (Fig. 3/D22) from the new CPU 68332 PCB.

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The D22 module contains device data (such as device identification, operating hours, enabled options, and customer-specific settings). Each device has its own device identification. Therefore, the module must be transferred from the old CPU 68332 PCB to the new one. If this module is faulty, the device can be operated with the new D22 module which is available on each new CPU 68332 PCB. However, in this case the device has only the basic settings, optional features must be enabled, see service diagnosis mode.

Important: The time must be set!

7 Remove the module D22 (EEPROM) from the faulty CPU 68332 PCB and plug it onto the new CPU 68332 PCB observing the IC identification, see Fig. 3.

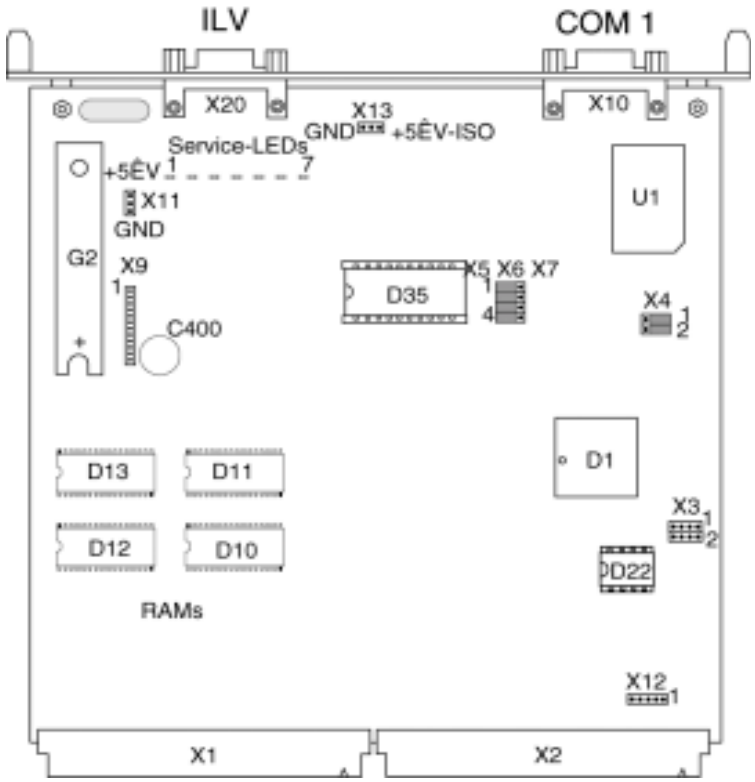

Fig. 3 CPU PCB 68332

8 Check the jumper configuration and change if applicable.

A faulty CPU 68332 PCB is special waste. Dispose of a faulty CPU 68332 PCB according to applicable waste disposal regulations.

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9 Dispose of the faulty printed circuit board according to applicable waste disposal regulations.

10 Push the new CPU 68332 PCB into the device.

11 Secure the CPU 68332 PCB to the device using the screws.

12 Install the respective CPU 68332 PCB software.

13 Plug the power plug of the device into the socket-outlet.

14 Switch the device on.

15 Perform “electrical safety tests” and “function tests” as described in the PMS procedure. For the USA and Canada: test according to CAN/CSA-22.2 No. 601.1-M90.

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